



# Region 5 Water

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## Kennecott Eagle Mine Project

- [Redesigned Treated Water Infiltration Systems Does Not Need a UIC Permit \(PDF\)](#) (1 p, 292KB) (Letter from EPA to Kennecott)
- [Presentation from EPA Open House, Oct. 22, 2008](#) (19 pp, 410KB)
- [Frequently Asked Questions About Environmental Aspects of the Kennecott Eagle Mine Project PDF](#) (6 pp, 109KB)
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### About the Project

Kennecott is constructing a nickel and copper sulfide mining operation within the Yellow Dog Plains of northwestern Marquette County in the Upper Peninsula of Michigan. EPA notified Kennecott Eagle Minerals Company that it had to obtain approval from the [Underground Injection Control \(UIC\) Program](#) before construction and operation of any underground injection well at the mining site. EPA requires this approval under the Safe Drinking Water Act (SDWA) to protect underground sources of drinking water.

### EPA's Role and Regulatory Responsibility Under the Safe Drinking Water Act

EPA's only direct regulatory role in the Eagle Project relates to the UIC Program requirements. This role is limited to regulation of systems that dispose of wastewater underground through underground injection wells. Kennecott Eagle Minerals Company plans to use three types of disposal methods that EPA regulates.

- **Sanitary Waste Disposal** - Kennecott proposes to use a large-capacity septic system for underground disposal of treated sanitary waste. EPA has authorized this system "by rule". "Rule-authorization" means the well must comply with all the requirements of the UIC program but does not require an actual UIC permit.
- **Mine Backfill** - Kennecott will need to place waste rock and concrete into mined-out areas. This would be done in the future as parts of the mine are closed. Kennecott submitted information about the two boreholes that will be used for this purpose in March 2010. EPA has rule-authorized these injection wells.
- **Mine Re-flooding** - At the end of mining, Kennecott will pump water into any remaining small empty spaces (the voids between the rocks and cement backfill). Kennecott submitted basic information about how it plans to do this in March 2010. EPA has requested information about this aspect of the mining operation to determine what the company must do to comply with UIC regulations.

**Industrial Waste Water Disposal** - Kennecott proposes to use a Treated Water Infiltration

#### Site Location

★ Approximately 25 miles west of Marquette, Michigan (Upper Peninsula, Marquette County, Michigamme Township)

[Proposed Site Diagram](#) (JPG, 130KB)

#### Status of Underground Injection Control Program Decision

EPA has determined that the redesigned Treated Water Infiltration System is not regulated by EPA.

#### Public Participation/Contact Information

If you would like us to notify you of public participation opportunities, please send an email to [Ross Micham](mailto:micham.ross@epa.gov) ([micham.ross@epa.gov](mailto:micham.ross@epa.gov)).

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System for underground disposal of up to 504,000 gallons per day of treated industrial process wastewater from mining operations. As originally designed, the system qualified as a [Class V](#) underground injection well. EPA received a permit application for construction and operation of this system in 2007. EPA was completing its review of the technical aspects of the this system when Kennecott withdrew its application for a UIC permit for the original design of this system in March 2010. EPA determined that the redesigned Treated Water Infiltration Systems does not need a UIC permit on July 1, 2010.

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## Other Key Federal Environmental Program Considerations

**Clean Air Act:** the Michigan Department of Environmental Quality (MDEQ) issued an air permit to Kennecott in December 2007 after a 78-day extended public comment period. EPA reviewed the permit, had several discussions with MDEQ about permit conditions, and had no formal comments.

**Clean Water Act:** MDEQ determined that there is no immediate connection between the water discharged underground at the site and local surface water. Therefore, MDEQ did not require the company to apply for a surface water discharge permit. EPA evaluated this decision and concurred.

**Endangered Species Act:** This Act protects Federally-listed endangered or threatened species and applies to individuals and companies. U.S. Fish & Wildlife Service informed EPA that there may be federally listed species or critical habitat in or near the site of the proposed facility.

**EPA Indian Policies:** EPA has been working directly with the Keweenaw Bay Indian Community and other affected tribes on how UIC program regulations apply to the Eagle Project. EPA has additional responsibilities when implementing environmental programs to work with tribal governments on those actions that may affect tribal lands and resources. The proposed mine is located within ceded territory under the Treaty of 1842. The Keweenaw Bay Indian Community is located 30-40 miles west of the proposed mine.

Note that the [National Environmental Protection Act](#) and the [National Historic Preservation Act](#) apply only to federal undertakings, such as EPA permits. Since there are no federal permits at issue, these laws do not apply to this project at this time.

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## State's Role

The [Michigan Department of Environmental Quality](#) [EXIT Disclaimer](#) (now the Department of Natural Resources and Environment) has issued a mining permit, an air use permit, and a ground water discharge permit to Kennecott Eagle Minerals Company for the Eagle Project. The [Michigan Department of Natural Resources](#) [EXIT Disclaimer](#) (now also part of the Department of Natural Resources and Environment) has granted the company two land leases.

## Timeline of Events

Month	Event
2010	
July	EPA determined that the redesigned Treated Water Infiltration System does not need a UIC permit.
May	EPA rule-authorizes mine backfill chutes.
March	Kennecott withdraws its UIC permit application after Michigan approves the re-design.
2009	
December	Kennecott responds to September 4, 2009 Maest/Prucha report.
November	Kennecott provides additional information about wastewater treatment plant.
October	Fish & Wildlife Service concurs with EPA Endangered Species Act determination.
September	EPA receives additional comments from Keweenaw Bay Indian Community. EPA receives Cadmus report on portions of January 2009 Maest report.

August	EPA determines that the project is "unlikely to adversely effect" any federally-recognized endangered species and requests Fish & Wildlife Service concurrence.
July	EPA receives Keweenaw Bay's comments on Kennecott's March 2009 letter.
June	EPA receives Cadmus review of additional information submitted by Kennecott.
April	Kennecott responds to request for inventory and other information concerning the proposed mine.
March	EPA requests inventory and other information concerning the proposed mine. EPA meets with Kennecott Eagle Minerals Company representatives.
February	Kennecott provides additional information responding to Cadmus report.
January	Kennecott provides additional information. EPA meets with the Keweenaw Bay Indian Community officials. Keweenaw Bay Indian Community submits Comments in Opposition to the Issuance of a UIC permit to Kennecott Eagle Minerals Company.
2008	
December	Kennecott provides partial response to request for additional details.
November	Kennecott provides partial response to request for additional details.
October	EPA requests additional details from Kennecott that are needed to complete the technical evaluation. (10/30/2008) <a href="#">EPA holds open house on Kennecott Mine proposal</a> (Press release) (10/22/2008)
August	Kennecott responds to EPA Request for Additional Information. (8/21/2008) Kennecott submits NHPA Section 106 Assessment. (8/18/ 2008)
July	EPA sends Kennecott a Request for Additional Information. (7/18/2008)
February	Grand Portage Band of Chippewa requests to be a consulting party on the project. (2/15/2008)
2007	
December	EPA meets with the Keweenaw Bay Indian Community officials. (12/13/2007)
November	Lac Vieux Desert Band of Chippewa requests to be a consulting party on the project. (11/19/2007)
October	EPA notifies other potentially affected tribes of NHPA issue and requests information about their connection to any traditional cultural property in the mine project footprint. (10/31/2007)
July	U.S. Fish and Wildlife Services notifies EPA that their records do not indicate the presence of federally listed species or critical habitat in or near the proposed project. (7/10/2007) Keweenaw Bay Indian Community requests consultation related to "traditional cultural property" and NHPA issues. (6/14/07)
May	EPA determines that the UIC permit application is complete. (5/29/2007)
April	EPA receives the requested UIC permit application. (4/27/2007) EPA approves the large capacity septic system for underground disposal of treated sanitary wastewater. (4/16/2007)
March	EPA requires Kennecott to submit a UIC permit application for the treated industrial wastewater infiltration system. ( <a href="#">Press release</a> ) (3/23/2007)
February	Kennecott provides information EPA requested about the septic system and the treated industrial wastewater infiltration system. (2/08/2007)
January	EPA meets with Kennecott officials to discuss UIC requirements. (1/16/2007)
2006	
March	EPA notified Kennecott of UIC requirements. (3/31/2006) EPA reviews state permit applications and determines that three disposal aspects of the project require UIC approval.
February	State receives permit applications from Kennecott for Eagle Project.

UIC Permit Application (withdrawn March 24, 2010)

EPA received Kennecott's UIC permit application on April 20, 2007. Kennecott submitted most of the same information it used to apply for the groundwater discharge permit from the Michigan Department of Environmental Quality (now Michigan Department of Natural Resources and Environment). Kennecott withdrew its UIC permit application on March 24, 2010.

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## Key Documents and Correspondence

(Note: This list includes only the most significant of the many documents related to this site-- [See Full List](#). If you are unable to find the item(s) you want, also see the state's websites. The [Michigan Department of Environmental Quality](#) [EXIT Disclaimer](#) (now the Department of Natural Resources and Environment) has issued a mining permit, an air use permit, and a ground water discharge permit to Kennecott Eagle Minerals Company for the Eagle Project Mine. The [Michigan Department of Natural Resources](#) [EXIT Disclaimer](#) (now also part of the Department of Natural Resources and Environment) has granted the company two land leases. If you still can't find what you're looking for, please feel free to [contact us](#).)

You will need Adobe Reader to view some of the files on this page. See [EPA's \(PDF\) page](#) to learn more.

Date	From	To	Subject
07/01/10	EPA (P. Silva)	Kennecott (J. Cherry)	Letter: <a href="#">Re-designed Treated Water Infiltration System Does Not Require a UIC Permit (PDF)</a> (1 p, 292K)
05/11/10	EPA (R. Harvey)	Kennecott (V. Peacey)	Letter: <a href="#">Proposed Class V Injection Wells for Mine Backfill (PDF)</a> (2 pp, 34K)
03/24/10	Kennecott (V. Peacey)	EPA (R. Harvey)	Letter: <a href="#">Withdrawal of Underground Injection Control (UIC) Permit Application (PDF)</a> (2 pp, 395K)
03/19/10	Kennecott (V. Peacey)	EPA (R. Harvey)	Letter: <a href="#">Response to Request for Additional Information on Mine Re-flooding Inventory (PDF)</a> (4 pp, 381K)
03/19/10	Kennecott (V. Peacey)	EPA (R. Harvey)	Letter: <a href="#">Response to Inventory Request. Delivery of Dry Solids through Drilled Boreholes (PDF)</a> (6 pp, 1.15M) Attachment 1: <a href="#">Underground CRF Plant Layout 3D Views (PDF)</a> (1 p, 341K) <a href="#">Underground CRF Plant Plan &amp; Elevations (PDF)</a> (1 p, 425K) <a href="#">Surface Plant Site Layout (PDF)</a> (1 p, 625K) <a href="#">Surface Plant Plan &amp; Elevations (PDF)</a> (1 p, 326K) Attachment 2: <a href="#">Lafarge Trinity White Portland Cement Product Data Sheet (PDF)</a> (2 pp, 147K) <a href="#">Lafarge Trinity White Portland Cement Material Safety Data Sheet (PDF)</a> (6 pp, 109K)
02/05/10	EPA (R. Harvey)	Kennecott (J. Cherry)	Letter: <a href="#">Request for Inventory and Additional Information about the Proposed Kennecott Eagle Mine (PDF)</a> (2 pp, 38K)
12/18/09	Kennecott (V. Peacey)	EPA (R. Harvey)	Letter: <a href="#">Response to Memorandum Dated 09/04/2009 from Ann Maest (Stratus Consulting, Inc.) and Robert Prucha (Integrated Hydro Systems) (PDF)</a> (15 pp, 97K) The CD which accompanied this letter is available on <a href="#">request</a> .
12/04/09	Kennecott (J. Cherry)	EPA (R. Harvey)	Letter: <a href="#">Response to 11/18/2009 Request for Inventory on Mine Re-flooding (PDF)</a> (3 pp, 406K)
09/04/09	Honigman (J. Polito)	EPA (R. Harvey)	Letter: <a href="#">Tribe's Attorney Addresses Kennecott's 04/28/2009 Letter to EPA (PDF)</a> (34 pp, 988K)
04/28/09	Kennecott (J. Cherry)	EPA (R. Harvey)	Letter: <a href="#">Response to EPA Request for Inventory and Other Information Concerning Mine Project (PDF)</a> (11 pp, 2.8M)
03/18/09	Kennecott (J. Cherry)	EPA (R. Harvey)	Letter: <a href="#">Response to EPA's 03/13/2009 Letter About Kennecott's Failure to Respond to EPA's Prior Requests About Mine Backfill (PDF)</a> (1 p, 68K)

03/13/09	EPA (R. Harvey)	Kennecott (J. Cherry)	Letter: <a href="#">Third Request for Inventory and Other Information Concerning the Proposed Kennecott Eagle Mine (PDF)</a> (6 pp, 250K) Attachments: <a href="#">March 31, 2006 letter (PDF)</a> (4 pp, 222K) and <a href="#">January 31, 2007 letter (PDF)</a> (5 pp, 216K)
05/20/08	Great Lakes Indian Fish & Wildlife Commission (J. Coleman)	EPA (R. Micham)	Letter: <a href="#">Stormwater in the Kennecott Eagle Mine (PDF)</a> (2 pp, 37K)
05/1/08	Honigman (J. Polito)	EPA (R. Harvey)	Letter: <a href="#">Keweenaw Bay Indian Community's Attorney Discusses Why Kennecott Should Be Required to Get a UIC Permit (PDF)</a> (12 pp, 372K)
12/10/07	Honigman (J. Polito)	EPA (R. Harvey)	Letter: <a href="#">Keweenaw's Attorney Discusses Why Kennecott Should Also Provide Inventory for Mine Backfill (PDF)</a> (8 pp, 620K)
4/16/07	EPA (R. Harvey)	Kennecott (J. Cherry)	Letter: <a href="#">Rule Authorization of Large Capacity Septic System (PDF)</a> (2 pp, 54K)
02/2/07	Kennecott (J. Cherry)	EPA (J. Traub)	Letter: <a href="#">Transmittal of Inventory Sheets for TWIS and sanitary septic system (PDF)</a> (10 pp, 1,261K)
01/31/07	EPA (J. Traub)	Kennecott (J. Cherry)	Letter: <a href="#">Request for UIC Program Information for Eagle Project (PDF)</a> (5 pp, 216K)
06/23/06	EPA (R. Harvey)	Honigman (J. Polito)	Letter: <a href="#">UIC Role in Proposed Underground Injection Wells for Kennecott Eagle Mine (PDF)</a> (1 p, 35K)
06/19/06	National Wildlife Federation (M. Halley)	EPA (R. Harvey)	Letter: <a href="#">Request for EPA to Require UIC Permit for Proposed Underground Injection Wells for Kennecott Eagle Mine (PDF)</a> (36 pp, 1.8M)
06/9/06	Honigman (J. Polito)	EPA (R. Harvey)	Letter: <a href="#">Concerns with Proposed Kennecott Underground Injection Wells (PDF)</a> (10 pp, 499K)
03/31/06	EPA (R. Harvey)	Kennecott (J. Cherry)	Letter: <a href="#">Notification of Inventory Requirements and Request for inventory (PDF)</a> (4 pp, 222K)

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